

### **REMARKS**

The courteous interview granted to applicants' undersigned attorney and Dr. Gary Wentworth on April 12, 2006, is hereby acknowledged with appreciation. At the interview, the invention, the outstanding Office Action, and the prior art of record were thoroughly discussed. It was agreed at the interview that a new Declaration Under 37 C.F.R. §1.132 would be submitted pointing to unexpected results data presented in the specification. The new Declaration of Gary Wentworth is attached hereto as *Exhibit A*.

The objections to claims 6-13, 18, 20 and 22 (paragraph 2 of the Office Action) and the rejections of claims 6-22, 44 and 49-58 under 35 U.S.C. §112 (paragraph 14 of the Office Action) have been obviated by appropriate claim amendments. Withdrawal of these objections and rejections is respectfully requested.

It is submitted that the objection to claim 35, which contains CAS# of the claimed dimers, is extremely specific and otherwise not capable of a more precise definition since CAS# 61788-89-4 is a mixture of compounds (fatty acids, C-18-unsaturated dimers). Accordingly, it is submitted that the objection to claim 35 should be withdrawn.

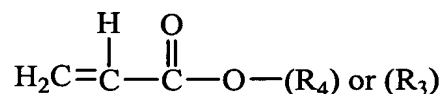
Enclosed is a proper terminal disclaimer to obviate all obviousness-type double patenting rejections. All applications and patents cited in the double patenting rejection were commonly owned with the assignee of this application at the time the invention in this application was made, as described in the terminal disclaimer pointing to the recorded assignments. Withdrawal of all double patenting rejections is respectfully requested.

### **PRIOR ART REJECTIONS**

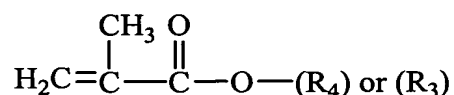
Claims 1-4, 41, 42, 49, 51-53, 57 and 58 stand rejected under 35 U.S.C. §102(b) as anticipated by Sanderson et al. 4,077,926 ('926). It is submitted in the first Office Action that the "soft" and "hard" monomers meet applicants formula I esters.

The definition of the formula I ester (moiety R<sup>2</sup>) has been amended in independent claims 1 and 49 to define the R<sup>2</sup> moiety as a C<sub>6</sub>-C<sub>24</sub> fatty acid residue (saturated or unsaturated having 1-6 carbon-to-carbon double bonds). Support is found at page 2, lines

10-21, and elsewhere throughout the specification. The Sanderson '926 "soft" and "hard" monomers, include the following:



or



Applicants R<sup>2</sup> (C<sub>6</sub>-C<sub>24</sub>) clearly distinguishes over the Sanderson '926

$\text{H}_2\text{C}=\overset{\text{H}}{\underset{|}{\text{C}}}-$  and  $\text{H}_2\text{C}=\overset{\text{CH}_3}{\underset{|}{\text{C}}}-$  moieties. Accordingly, the rejection under 35 U.S.C. §102(b) should be withdrawn.

Claims 1-4, 6-8, 10, 13, 14, 18-22, 24, 34, 39, 41, 42, 45-50, 53, 57 and 58 stand rejected under 35 U.S.C. §103(a) as unpatentable over D'Sidocky et al. (U.S. 5,985,963) in view of Oshiyama et al. (4,789,381).

This rejection is predicated upon the obviousness of adding an ester from one reference (Oshiyama '381) into an adhesive resin containing rubber composition of another reference (D'Sidocky '963). As stated in the parent application, the addition of a lubricant where adhesion is required is completely non-obvious since the addition of a lubricant would be expected to lower adhesion.

It is stated in the first Office Action that "it is prime facie obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose." It is submitted that the esters of D'Sidocky and Oshiyama are, in fact, disclosed to be useful for opposite purposes, despite the fact that ultimately, both may be useful in a tire that contains tire cord. While Oshiyama uses applicants' claimed esters (Formulas I and II) to coat the tire cord during manufacture for lubricity to avoid fuzzing and breakage on account of increased friction, D'Sidocky's rosin esters are employed as a tackifier.

The alleged obviousness of combining one or more of applicants' claimed esters together with the adhesive resins on the basis that lubricants have been added to rubber compositions is most effectively negated, as explained at the May 7, 2004 interview in the parent application, based on the negative teachings of the Winstanley et al., U.S. Patent 3,564,007, ('007) attached as *Exhibit B*. "Lubricity" (Oshiyama) is essentially the opposite of "adhesion" (D'Sidocky). As disclosed in the Winstanley et al. '007 Patent, a lubricant is used in the construction of tires containing steel cords by "applying a lubricant in two spaced apart circumferential bands around the first reinforcing layer." (Col. 1, Lines 20-21). In this manner, "relative slip between said layers is allowed by virtue of said bands of lubricant." (Col. 1, Lines 33-34). It is stated that the lubricant does not significantly affect the strength of adhesion of the rubber surfaces surrounding the lubricant (Col. 1, Lines 58-62):

"...after the molding and vulcanization of the tire the properties of the rubber surfaces between which the lubricant acts are not significantly effected, particularly the strength of adhesion between said surfaces."

The '007 Patent makes it quite clear why adhesion is not significantly affected by the lubricant, because **the lubricant is omitted where adhesion is required**. (Col. 2, Lines 55-57):

"...leaving a marginal portion of the chafer strip devoid of lubricant to enable adhesion to take place between the chafer strip 1 and a superposed carcass ply 2."

In view of this negative teaching, and the data pointed out in Tables I - III of applicant's specification, providing adhesive strength data for the claimed combination of ester and adhesive resin vs. no ester or adhesive resin, it is submitted that the prior art rejection should be withdrawn.

Claims 5 and 23 stand rejected under 35 U.S.C. §103(a) as unpatentable over D'Sidocky ('963) in view of Oshiyama ('381) and Solomon U.S. 4,448,813. This rejection should be withdraw for the reasons stated above with reference to the combination of D'Sidocky and Oshiyama. Solomon neither discloses nor suggests any motivation for adding the **lubricating** esters of the Oshiyama ('381) patent to the D'Sidocky composition for the purpose of better adhesion.

Claim 5 stands rejected under 35 U.S.C. §103(a) as unpatentable over Sanderson ('926) in view of Solomon ('813). As explained above, applicants'  $R^2$  moiety of formula I (claim 5) has been amended to  $R^2=C_6-C_{24}$ . The Sanderson '926 moiety to the left of the carbonyl is  $C_2$  or  $C_3$ . Since the Sanderson '926 patent neither discloses nor suggest applicants' formula I, and is very specific that R is H or methyl (col. 3, line 39,40), there is no motivation to increase the length of R to  $C_4^+$  in order to meet applicants' claim 1, particularly since Sanderson is directed to a pressure sensitive adhesive composition. Since no prior art suggests increasing the '926 R moiety from  $C_1$  to  $C_4$ , it is submitted that to do so would destroy the teachings of the Sanderson '926 patent. Sanderson '926 teaches required Tg(s) (Col. 3, lines 54<sup>+</sup>), shear resistance, and other required properties. One of ordinary skill would not depart from R=H or methyl to at least  $C_4$  and expect similar results.

It is submitted that there is no motivation to enlarge the R of the Sanderson '926 patent from H or  $CH_3$  to  $C_4 - C_{24}$  ( $R^2 = C_6 - C_{24}$ ) as now claimed by applicants herein. Accordingly, it is submitted that the rejection of claim 5 should be withdrawn.

Claims 6-22, 45 and 50 stand rejected under 35 U.S.C. §103(a) as unpatentable over Sanderson '926 in view of Sing et al. 5,298,539. It is submitted that this rejection should be withdrawn for the reasons set forth above with reference to the lack of motivation for increasing the R length in the Sanderson '926 patent. Further there is no motivation for adding a melamine adhesive to the Sanderson pressure sensitive adhesive. As known to those skilled in the pressure sensitive adhesive art, the proper relationship must exist between "tack" and "shear resistance" (*see* last sentence of the '926 Abstract) for a pressure sensitive adhesive to work properly. At random additions of adhesive resins would destroy this proper relationship.

Claims 43, 44, 55 and 56 stand rejected under 35 U.S.C. §103(a) as unpatentable over Sanderson '926 in view of Huynh-Tran et al. U.S. 2003/0166743. It is submitted that this rejection should be withdrawn for the reasons set forth above with reference to the lack of motivation for increasing the R length in the Sanderson '926 patent. Further there is no motivation for adding a reactive diluent to the Sanderson pressure sensitive adhesive. As known to those skilled in the pressure sensitive adhesive art, the proper relationship must exist between "tack" and "shear resistance" (*see* last sentence of

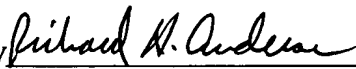
Abstract) for a pressure sensitive adhesive to work properly. At random additions of reactive diluents would destroy this proper relationship.

It is submitted that all claims are of proper form and scope for allowance.  
Early and favorable consideration is respectfully requested.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 13-2855, under Order No. 27702/10065 from which the undersigned is authorized to draw.

Dated: May 2, 2006

Respectfully submitted,

By 

Richard H. Anderson

Registration No.: 26,526  
MARSHALL, GERSTEIN & BORUN LLP  
233 S. Wacker Drive, Suite 6300  
Sears Tower  
Chicago, Illinois 60606-6357  
(312) 474-6300  
Attorney for Applicants